

REMARKS

Claims 21-40 are pending in the Application. Claims 41-43 have been added. Of the claims remaining in the case, claims 21, 24 and 27 are independent claims. Claims 23, 26, 29, 30, 33 and 37 are objected to in view of various informalities. Claims 21-40 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Number 5,343,226 to Niedermeyer et al. For the reasons set forth below, Applicant respectfully traverses these rejections, and reexamination and reconsideration of the Application are respectfully requested.

Objections Based on Informalities

Claims 23, 26, 29, 30, 33 and 37 are objected to in view of various informalities. Specifically, the Examiner has stated that the language “if coupled” in claims 23, 26 and 29 is “ambiguous, as it is unclear as to what [would] happen if the components are not coupled.” the Examiner has also observed that in claim 30 the word “it” is indefinite and should be deleted, in claim 33 there is a lack of antecedent basis for “the port,” and in claim 37 the word “pint” should be changed to “printer.” Appropriate corrections have now been made. Further such corrections to address other informalities discovered by Applicant have also been made.

35 U.S.C. § 102(b) Rejections

Claims 21-40 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Number 5,343,226 to Niedermeyer et al.

In order to make out a prima facie case of anticipation under 35 U.S.C. § 102, an Office Action must positively demonstrate that “each and every element as set forth in the [rejected] claim is found, either expressly or inherently described, in a single prior art reference.”

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631 (Fed. Cir. 1987).

Because the Examiner has not met this burden in articulating the Section 102 rejections, Applicant respectfully contends that the Examiner has failed to establish a prima facie case of anticipation in the present Office Action. In any event, Applicant offers the following arguments in rebutting the Section 102(b) rejections.

Regarding independent claims 21 and 24, the Examiner has asserted that Niedermeyer discloses, among other things, “a duplex coupler.” Applicant respectfully asserts that this is a misreading of both the present Application and the Niedermeyer reference. Further, based on this flawed reading of the references, the Examiner then summarily concluded that the method of using Applicant’s invention as recited in independent claim 27 is “inherent in view of the functions of the device of Niedermeyer.”

Niedermeyer neither teaches nor suggests a *duplex* coupler as disclosed and claimed by Applicant. Rather, Niedermeyer only discloses equipping an ink container 60 with a cap 88 that is screwed directly onto the ink reservoir 10. It is this cap 88 that is configured with a valve enclosure 92 and a plunger member 94 that allows for selectively discontinuing the flow of ink from the container 60. See column 5, lines 11-36, and Figures 9-11. At best, then, Niedermeyer only discloses a single coupling component that is installed on the ink bottle. There is simply no suggestion that a second coupling component could be attached to the reservoir 10 so as to

engage the first coupling component of the bottle and thereby create a *duplex* coupler selectively sealing both the bottle and the reservoir when the components are disengaged as in Applicant's invention. In fact, such structure would not even be possible in the Niedermeyer device. As shown and described in the Niedermeyer reference, "the plunger member 94 is opened or unseated from the cap 88 by contact between the valve actuating member 62 [of the reservoir 10] and a concave actuating surface 100 of the plunger member 94." See column 5, lines 25-29, and Figure 10. If there were a second coupling component installed in the opening 58 of the reservoir base 52 then the upwardly projecting valve actuating member 62 would be unable to engage the plunger member 94 of the first coupling component 88 installed on the bottle 60, rendering the Niedermeyer device non-operational.

In contrast to the Niedermeyer reference, Applicant's invention includes *both* a first coupling component and a second coupling component, *each* having a valving mechanism and together constituting a *duplex* coupler, whereby the duplex coupler may be selectively coupled to cause the flow of ink therethrough and may be selectively uncoupled to discontinue the flow therethrough so as to mitigate leakage of ink from both the container and the reservoir. This distinction is most easily noted by simply comparing Figure 1 of the Niedermeyer reference with Figure 1 of the present Application. As is clear, the Niedermeyer device involves the installation of the bottle 60 with cap 88, or first coupler, directly to the reservoir 10, whereas in Applicant's device there are first and second coupling components 21 and 22 installed between the container 17 and the reservoir 11, again, together constituting the claimed duplex coupler 20. When the first and second coupling components of Applicant's device are connected, they cooperate to open their respective valves and allow the flow of ink, without the need for any direct interaction

with the reservoir itself for actuation, whether through an upwardly projecting actuator or otherwise. And then when the first and second coupling components are disconnected, as when a sufficient amount of ink has been dispensed from the container into the reservoir, the duplex coupler of the present invention allows both the container and the reservoir to be sealed off, unlike the Niedermeyer device where the reservoir remains open after the bottle is removed.

The construction of Applicant's invention thus has numerous advantages over the Niedermeyer device. For one, by sealing both the container and the reservoir upon disconnection, the potential for ink leakage is reduced as compared to sealing only the container. Relatedly, by sealing the reservoir as in the present invention, harmful contamination of the ink being supplied to the one or more print heads of the typical ink jet printer is prevented, whereas the Niedermeyer device leaves the reservoir open to the environment and such contaminants, unless, of course, the reservoir is capped in a separate step after the bottle is removed, which step is not required in Applicant's invention. Rather, in Applicant's device, the sealing of the reservoir happens conveniently and substantially instantaneously upon disengaging the duplex coupler. Moreover, in the Niedermeyer device, the actuation of the plunger-type valve contained in the bottle cap is known to be prone to malfunction due to the relative difficulty of properly aligning and positively engaging the upwardly projecting valve actuating member with the valve plunger member when the bottle is installed on the reservoir base. Such malfunctions can lead to ink leakage and related complications. By comparison, with Applicant's duplex coupler and positive engagement of the interacting sealing members and other structure formed within the respective first and second coupling components, quicker and more fool-proof connection and disconnection between the replaceable ink container and the reservoir results. The

overwhelming response to Applicant's invention in the marketplace is further evidence of these advantages. It follows that Niedermeyer neither anticipates nor renders obvious the improved and easily distinguishable duplex coupler structure of Applicant's invention.

Accordingly, claims 21 and 24 have been amended to more clearly recite the structure of the duplex coupler of the present invention, namely, the inclusion of both a first and second coupling component each having a sealing member for selectively sealing both the container and the reservoir. Applicant notes that support for these amendments is found in the Application at least at pages 10-12 and in Figures 1-4. Applicant respectfully submits that such structure is not anticipated or rendered obvious by Niedermeyer, alone or in combination with the other prior art of record, and requests allowance of claims 21 and 24 as amended on that basis.

It follows that the claims that depend from independent claims 21 and 24, presently numbered 22, 23, 25, 26, 30-33 and 36-43, are each allowable also, as depending from and further limiting an allowable claim. With respect to claims 23, 26, 36 and 39, specifically, regarding which the Examiner observed that "the reservoir [of Niedermeyer] has a floor that is substantially flat," Applicant respectfully contends that this is simply not the case. Rather, as explained above, Niedermeyer only discloses and teaches a floor of the reservoir having a vertically projecting valve actuating member 62 necessary for actuation of the plunger member 94. As such, the reservoir floor of the Niedermeyer device is clearly not "substantially flat." In contradistinction to Applicant's invention, the vertical projection from the floor of the reservoir is necessary to the operation of the Niedermeyer device, without which the device would fail to function as intended. Again, in Applicant's device the first and second coupling components are

configured to cooperate to open their respective valves and allow the flow of ink when coupled, without the need for any direct interaction with the reservoir itself for actuation, much less through an actuator extending from the floor of the reservoir. Hence, unlike the Niedermeyer device, Applicant's device is capable of operating though the floor of the reservoir is "substantially flat." Therefore, claims 23, 26, 36 and 39, and those claims that depend therefrom are further allowable over Niedermeyer on this basis as well. Finally, with regard to new dependent claims 41 and 42, Applicant contends that further limitations related to the specific structure of the valve members of the first and second coupling components are recited that are clearly neither shown nor described in the Niedermeyer reference. And in new dependent claim 43, an adapter is recited that is not only not suggested by Niedermeyer, but would be completely nonsensical and duplicative in the Niedermeyer device in view of the cap 88 and its function. Applicant notes that support for the more specific structural features of claims 41-43 is found at least on pages 10 and 12 and in Figures 2-4 of the Application as originally filed.

It follows from the foregoing that the method for operating an ink jet printer according to the present invention, as recited in claims 27-29, 34 and 35, is also neither anticipated nor rendered obvious in view of Niedermeyer. To this end, Applicant has also amended independent claim 27, particularly, so as to make clear that that the duplex coupler employed involves both a first and a second coupling component, each of which containing a sealing member so as to selectively seal off both the container and the reservoir, respectively. Particularly, the Examiner will appreciate that the newly recited step of "coupling the first and second coupling components so as to open the respective first and second sealing members and allow a flow of ink from the container to the reservoir through the duplex coupler" is clearly not "inherent in view of the

functions of the device of Niedermeyer” as alleged. Rather, such a step is neither taught nor required by the Niedermeyer device. As such, claim 27 and claims 28, 29, 34 and 35 that depend therefrom are also allowable on this basis alone. Furthermore, the above comments regarding the floor of the reservoir in Applicant’s device being shown, described and recited as being “substantially flat” apply with equal force here to dependent claim 29, providing an additional basis for allowance.

Regarding the amendment to numerous ones of the apparatus and method claims now pending in the present Application wherein it is clarified that the first and second coupling components are “removably attached to,” rather than “formed on,” the respective container and reservoir, Applicant notes that support for these amendments is clearly found at least at page 14 of the Application as originally filed.

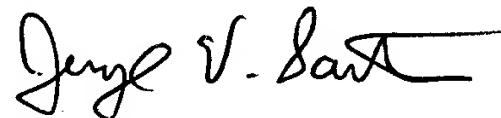
From the foregoing it is clear that Applicant has made a valuable contribution to the art of printer ink supply systems, not only with the invented apparatus, but with the method of using such apparatus. It is respectfully submitted, then, that claims 21-43, as amended, distinguish over the art and are now in condition for allowance. Prompt notice thereof is respectfully requested.

CONCLUSION

From the foregoing it is apparent that Applicant has made a valuable contribution to the art. The claims now in the case patentably distinguish over the prior art of record and are in condition for allowance. Consequently, early notice of allowance is respectfully solicited. If the Examiner is not in agreement, it is requested that he feel free to telephone the undersigned to discuss any concerns that may exist regarding allowance.

Respectfully submitted,

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